UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,537	10/09/2001	Pasi Into Loukas	7812	7812

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EXAMINER
MARCELO, MELVIN C

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)
		09/973,537	LOUKAS, PASI INTO
Office Action Summary		Examiner	Art Unit
		Melvin Marcelo	2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _29 March 2006_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _8-20, 22, 24 and 26_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _9, 14, 16 and 18-20_ is/are rejected.

7)☒ Claim(s) _8-20, 22, 24 and 26_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _09 October 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments with respect to claims 9, 14, 16, 18, 19 and 20 have been

considered but are moot in view of the new ground(s) of rejection.   The new grounds are based

on the language of the claims.

Claim Objections

2.   Claims 8, 10, 15, 20, 22, 24 and 26 are objected to because of the following

informalities: the recited examples in the claims are requested to be removed in order to

provide a cleaner version of the claimed subject matter since examples are not considered part

of the claimed subject matter. Appropriate correction is required.

The following changes with respect to the objection are suggested:

Claims

8. A soliton transmission method, comprising:

forming a group of two or more partially overlapping short pulses, said pulses being
electromagnetic radiation pulses, such as laser light pulses, and having a significantly same
wavelength to stay as a group;

transmitting data by sending such pulse group(s) as solitons, the data being encoded in said
pulse groups by modulating:
      (a)   individual pulses in a said group,
      (b)   and/or, the pulses of a said pulse group as a group;

receiving said pulse groups and decoding the data carried by them.

10. A soliton transmission method according to claim 8, comprising:
using said pulse group as components of data packets in packet based networks, like the
Internet.

15. A packet switching method for packet based networks, especially for wide area networks like the Internet, comprising:

a node computer sampling packets from incoming packet traffic, reading certain property(ies) of the sampled packets and predicting on the basis of said sampled property information the intermediate and/or final delivery addresses of the non-sampled packets;

the node computer switching the non-sampled packets according to the respective delivery address predictions to the appropriate output ports.

20. A packet routing method for packet based networks, especially for wide area networks like the Internet, comprising:

node computer(s) segregating the packet traffic using the following method:

a node computer delivering through different segregated routes in the network the packets which have a same intermediate or final delivery address, using the following method:

a node computer reading/resolving the source address, content type or other property of a packet, which does not constitute a delivery address or a reference to a delivery address;

the node computer choosing for said packet a route according to said read property from among plurality of routes of which each is dedicated to deliver packets which have certain value(s) of said read property assigned to that route, said route chosen also to be suitable with respect to the intermediate and/or final delivery address of said packet;

the node computer delivering said packet to go through said chosen route.

22. A packet switching method for packet based networks, especially for wide area networks like the Internet, comprising:

transmitting an ad-hoc informant packet along with the packet traffic, the header or other section of said informant packet containing information which specifies the pattern according to which

certain individual packets in the same packet traffic are mutually interleaved according to their plurality of different intermediate and/or final delivery addresses, said information individually distinguishing said packets and their addresses;

a node computer receiving said informant packet and using its information to distinguish said packets and their individual intermediate and/or final delivery addresses, and to switch said packets respectively to plurality of different appropriate output ports.

24. A packet switching method for packet based networks, ~~especially for wide area networks like the Internet~~, comprising:

the header or other section of a packet containing a direct reference to another packet in the same packet train, said reference individually distinguishing the referred packet and specifying its location in the packet train;

a node computer reading said reference and using it to locate the referred packet in the packet train, and either:

  (a)   switching the referring packet to the appropriate output port according to a
         certain property of the referred packet,

  (b)   or, switching the referred packet to the appropriate output port according to a
         certain property assigned for the referred packet in the referring packet;

wherein said certain property is an intermediate or final delivery address, or other property.

26. A method for distinguishing dispersed packets, for packet based networks, ~~especially for wide area networks like the Internet~~, comprising:

transmitting an ad-hoc informant packet along with the packet traffic, the header or other section of informant packet containing information which specifies the pattern according to which the individual packets of a dispersed group of packets in the same packet traffic are interleaved with other packets of the packet traffic, said information individually distinguishing the dispersed packets of said group;

a node computer receiving said informant packet and using its information to distinguish said

dispersed packets and to have a custom processing for them, ~~like for example switching said~~

~~dispersed packets to appropriate output port(s) according to instructions given in said informant~~

~~packet~~.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

4.   Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the

enablement requirement. The claim(s) contains subject matter which was not described in the

specification in such a way as to enable one skilled in the art to which it pertains, or with which it

is most nearly connected, to make and/or use the invention.

With respect to claim 9, it is not clear from the disclosure (specification and drawings)

that the individual pulses in a pulse group are modulated by using <u>more</u> of the following (a)

position modulation, (b) phase modulation, (c) width modulation, (d) amplitude modulation, and

(e) polarization modulation. In particular, Figures 3-6 represent only a single modulation of the

individual pulses. The specification provides a cursory statement that "any combination of the

modulation methods A through E" (page 7, lines 10-11). However, it is not evident, for example,

that the individual pulses within a group can be modulated by all five position, phase, width,

amplitude and polarization modulations.

Similarly with respect to claim 9, it is not clear from the disclosure that the pulse group

itself are modulated by using more of the following: (a) position modulation, (b) phase

modulation, (c) width modulation with respect to the width of said pulse group, (d) width

modulation with respect to the average width of the pulses in said pulse group, (e) amplitude

modulation with respect to the highest amplitude of the pulses in said pulse group, (f) amplitude

modulation with respect to the average amplitude of the pulses in said pulse group and (g) pulse

number modulation with respect to the number of pulses of said pulse group. Again, the

specification appears to provide only a cursory statement that "any combination of the

modulation methods G through M" (page 7, line 17) without providing a description of how the

combination is accomplished. Can a pulse group be modulated by all seven modulations at the

same time?

The examiner suggests changing the phrase "one or more of the following" to --one of

the following-- in lines 2 and 8 of claim 9.

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

   The specification shall conclude with one or more claims particularly pointing out and distinctly
   claiming the subject matter which the applicant regards as his invention.

6.   Claims 14, 16, 18, 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Claim 14, line 11, recites "or other property." This phrase is indeterminate since there

can be an infinite list of what constitutes "other property" and thus, does not provide a

delineation of applicant's claimed subject matter. With respect to applicant's disclosure, what

are these "other property" that are not the ones recited in the specification and claims?

Claim 16, line 7, "(e) or, other packet properties" is indeterminate. What are these "other

packet properties" that are distinguishable from those recited in (a) to (d)?

Claim 18, line 4, "or other properties" is indeterminate.

Claim 19, line 4, "or other properties" is indeterminate.

Claim 20, line 6, "or other property of a packet" is indeterminate.
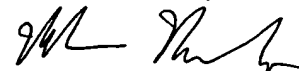
Allowable Subject Matter

7.   Claims 8-20, 22, 24 and 26 would be allowable if rewritten to overcome the objections

and rejection(s) under 35 U.S.C. 112, 1st and 2nd paragraph, set forth in this Office action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Melvin Marcelo whose telephone number is 571-272-3125. The examiner

can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you

would like assistance from a USPTO Customer Service Representative or access to the

automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Melvin Marcelo
Primary Examiner
Art Unit 2616

June 5, 2006